

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (cancelled)

2. (previously presented) A portable ventilator system comprising:

a hard shell device housing having an interior portion and an exterior surface;

said interior portion including a power subsystem connected to a pneumatic subsystem, a control subsystem, and an alarm subsystem;

said pneumatic subsystem comprising a dual head compressor connected to a single head compressor, said dual head compressor and said single head compressor constructed so as to operate at alternate times;

said control subsystem comprising a timing circuit connected to a relay, said relay further connected to said single head compressor and said dual head compressor so as to control on and off cycle between said dual head compressor and

allow said dual head compressor and single head compressor to operate at alternate times;

said power subsystem comprising a battery source connected to an electronic circuit which in turn is connected to a power jack, so as to supply regulated power to said pneumatic, control and alarm subsystems, said electronic circuit and said power jack further constructed so as to connect to an external power source;

said power subsystem further comprising a voltage regulator circuit so as to eliminate fluctuations in voltage to said control subsystem, said power subsystem also comprising a second voltage regulator circuit so as to supply lower voltages to said control and alarm subsystems;

said alarm subsystem connected to said pneumatic subsystem and further comprising an LED patient problem indicator so as to detect patient problems within said pneumatic subsystem;

said alarm subsystem further comprising a failure detect circuit connected to a non-repairable LED indicator, said circuit and non-repairable LED indicator connected to said control subsystem, so as to visually detect non-repairable problems within said control subsystem; and

said alarm subsystem further comprising a low voltage detect circuit connected to a repairable LED indicator, said circuit and repairable LED indicator connected to said power

subsystem and so as to visually detect repairable problems within said power subsystem.

3. (previously presented) A portable ventilator system as recited in claim 2 wherein said pneumatic subsystem further comprises a first input port constructed so as to allow ambient inhalation air to enter said ventilator;

a first section of medical grade y-tubing constructed so as to divide said ambient inhalation air into two flow paths;

said dual head compressor consisting of first and second input ports and first and second output ports, said input ports constructed so as to receive said ambient inhalation air from said y-tubing, said dual head compressor constructed so as to compress said ambient inhalation air, said first and second output ports further constructed as to dispel said compressed ambient inhalation air from said dual head compressor;

an air manifold constructed so as to receive said compressed ambient inhalation air and dispel said compressed ambient inhalation air to a first pressure sensor and a bi-directional flutter valve, said first pressure sensor constructed so as to detect pressure of said ambient inhalation air;

said flutter valve constructed so as to have a first inlet port so as to receive said compressed inhalation air, a second

bi-directional port constructed so as to transfer said inhalation to a patient;

said single head compressor constructed so as to allow said second port to also receive exhalation air from said patient; said flutter valve further constructed so as to transfer said exhalation air from said second port to a third outlet port, said outlet port constructed so as to allow said exhalation air to be monitored by a second sensor and transferred to a carbon dioxide detector, said single head compressor further constructed so as to remove dead air from said ventilator.

4. (previously presented) A portable ventilator system as recited in claim 3 wherein said control subsystem further comprises a first resistor connected to a second resistor and a capacitor so as to generate charging and discharging cycles;

said timing circuit connected to said first resistor, said second resistor and said capacitor so as to establish on and off states corresponding to said charging and discharging cycles, said timing circuit further connected to said relay, said relay configured so as to provide increased power of said on-off states corresponding to on and off states of said timing circuit;

said relay further comprising a relay control and a switch bar, said relay control constructed so as to switch said switch

bar between a second connector position and a first connector position;

said second connector position connected to said single head compressor so as to operate said single head compressor in said on and off cycle; and

said first connector position connected to said dual head compressor, so as to operate said dual head compressor in said on and off cycle corresponding to said increased power on-off states.

5. (previously presented) A portable ventilator system as recited in claim 4 wherein said alarm subsystem further comprises a light alarm suppression switch and an audible alarm connected to an audible alarm suppression switch;

said light alarm suppression switch constructed so as to suppress said non-repairable LED indicator, said repairable indicator and said patient problems indicator; and

said audible alarm constructed so as to provide sound based alarms corresponding to repairable, non-repairable and patient problem indications, said audible alarm switch further constructed so as to bypass said audible alarm as necessary.

6. (previously presented) A portable ventilator system as recited in claim 5 wherein said second sensor comprises a pressure sensor.

7. (previously presented) A portable ventilator system as recited in claim 5 wherein said second sensor comprises a flow sensor.

8. (previously presented) A method of operating a portable ventilator comprising the steps of:

(a) drawing ambient inhalation air into a dual head compressor,

(b) compressing said ambient air in said dual head compressor and monitoring the pressure of said compressed air while maintaining a single head compressor in an off position;

(c) transferring the compressed inhalation air into an air manifold and causing a flutter valve to open;

(d) transferring said compressed inhalation air from said manifold to said flutter valve through an input port;

(e) transferring said compressed inhalation air to a patient through a second bi-directional port in said flutter valve;

(f) maintaining an exhale port of said flutter valve closed when operating said dual head compressor;

(g) operating single head compressor to close off said input port and open exhale port, turning off said dual head compressor at the point when single head compressor is turned on, and allowing exhalation air from said patient to enter bi-directional port;

(h) transferring exhalation air through said exhale port and verifying the presence exhalation air using a second sensor; and

(i) removing exhalation air from said ventilator, through a patient exhale port.

9. (previously presented) A method of operating a portable ventilator as recited in claim 8 and further comprising the step of:

measuring concentration of carbon dioxide in exhalation air using a capnography sensor.

10. (previously presented) A method of operating a portable ventilator as recited in claim 9 and further comprising the steps of

(a) obtaining said on and off cycles using a timing circuit;

(b) controlling on and off cycles for said dual head compressor and said single head compressor using a relay switch;

(c) obtaining inhalation and exhalation cycles for the patient using said portable ventilator, said inhalation and exhalation cycles corresponding to said on and off cycles of said dual head and single head compressor;

(d) providing visual and audible alarms corresponding to patient related problems; and

(e) providing visual and audible alarms corresponding to ventilator repairable and non-repairable problems.

11. (previously presented) A method of operating a portable ventilator as recited in claim 10 comprising using a pressure sensor as said second sensor.

12. (previously presented) A method of operating a portable ventilator as recited in claim 10 comprising using a flow sensor as said second sensor.